



GROWING A BETTER  
**WORLD**<sup>®</sup>  
Horticulture

*Spider mite feeding damage on rose – photo by Matthew Shultz*

## Two Spotted Spider Mite

*Tetranychus urticae*

The Two Spotted Spider Mite, *Tetranychus urticae*, is the most prolific pest to nursery growers during the summer months. The 'Two Spot' gets its name from the two black spots on the back of the adult lifestage. These spots can be seen using a hand lens, and are usually used as an identifying trait. This pest overwinters either as fertilized eggs, or as dormant adults in more temperate climates. Eggs of the two spot are perfectly round, they too are often used in the identification process. Once temperatures start to creep towards 85F in the spring, mites will become increasingly active. When conditions are optimal an egg can develop into a sexually mature adult in less than one week. Females typically lay about 10-15 eggs daily for a couple of weeks under optimal conditions. In outbreak situations, colonies of the mites will produce webbing. Spider mites feed on the plant's tissue by inserting a stylet feeding tube into the leaf tissue and sucking out the plant's fluid. Stressed trees and shrubs are usually more susceptible to mite outbreaks. Keeping plants healthy and relatively stress free will help in the

battle against this pest. Two spot spider mites thrive in dusty environments. Mites are easiest to control with a preventative approach to IPM. Once populations get out of hand, two spot can be difficult to eradicate. Most registered miticides won't target all life stages. Rotating between ovicidal miticides and miticides that act upon the adult lifestage is often recommended. Spray programs should have 3 or more different modes of action. Some MOAs should be applied 2-3 times in succession, before rotating to another MOA. Always consult product labels for specific application instructions. Spray uniformity and coverage is critical when targeting mites. Often a spray surfactant is added to miticide sprays mixtures. There are also a couple commercially available mite predators which can be incorporated into IPM programs.

**CAUTION:** These recommendations are intended as guidelines to develop the grower's own program. Thoroughly read the individual product labels and conduct your own product trials before applying across the crop.



Spider mite colony – photo by Matthew Shultz

## Spray Options –

### ADULT/IMMATURE

- (6 ) Avid 4oz/100gals\*
- (25) Floramite SC 4-8oz/100 gals
- (13) Pylon 2.6-5.2oz/100gals(GH only)\*
- (21) Sanmite 4oz/100gals
- (20) Shuttle O 6.4-12.8oz/100gals
- (23) Judo 1-4oz/100gals\*
- (NA) Ultra Pure Oil 0.5-2gals/100gals

\* Translaminar activity

### Rotation Strategy-

- 1st Target/Spray: Mobile Stages (adults / immatures)
- 2nd Target/Spray: Immature stage & eggs

### IMMATURE/EGGS

- (10B) Tetrasan 8-16oz/100gals\*
- (10A) Hexygon 1-2oz/100gals
- (10A) Ovation 2oz/100gals
- (23) Judo 1-4oz/100gals\*
- (21) Akari 16-24oz/100gals
- (20) Shuttle O 6.4-12.8oz/100gals
- (25) Floramite SC 4-8oz/100 gals
- (NA) Ultra Pure Oil 0.5-2gals/100gals



## ICM Options-

### Phytoline P – Phytoseiulus persimilis

- Predatory mite Phytoseiulus persimilis
- Feeds exclusively on spider mites (mainly Tetranychus urticae)
- Eats all life stages of spider mites
- Can be used in wide range of crops
- Active from 59°F - 86°F (\*\*still active in low 90's)
- No diapause, but less active at low light levels
- Available as loose material
- Key benefit: higher predation due to freshness

### Anderline aa – Amblyseius andersoni

- Predatory mite Amblyseius andersoni
- Feeds on broad range of mites: Tarsonemid mites, Eriophyid mites
- Eats all life stages of spider mites
- Feeds on thrips and pollen
- Can be used in wide range of crops
- Active from 43°F - 104°F
- Survives dry conditions with minimal food
- Available as breeding system (sachets, Bugline™) and loose material
- Key benefit: mite control in wide range of temperatures

### Amblyline cal – Amblyseius californicus

- Predatory mite Amblyseius californicus
- Eats all life stages of spider mites
- Can be used in wide range of crops
- Active from 54°F - 104°F
- Survives dry conditions with minimal food
- Also feeds on tarsonemid mites and pollen
- Available as loose material
- Best benefit: Mite control in hot, dry conditions

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